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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,771	11/26/2003	Scott Mordin Hoyte	128596	7209

7590 08/26/2005

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EXAMINER

KRAMSKAYA, MARINA

ART UNIT	PAPER NUMBER
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2858

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/722,771		HOYTE ET AL.	
	Examiner		Art Unit	
	Marina Kramskaya		2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/23/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the newly amended paragraph [0033] states "Figure 3 illustrates an exemplary look-up table 300 of *parallel impedance gap* versus inductive gap that may be generated using method 200 (shown in Figure 2)". However, method 200 (Figure 2) only teaches the plot of *parallel impedance* versus inductive gap. The *parallel impedance* gap is not taught by method 200. There appears an omission of an essential step that describes how the *parallel impedance* translates to the *parallel impedance gap*.

Appropriate correction is required.

Claim Objections

2. Claims 7 and 8 are objected to because of the following informalities: the claims are unclear due to an apparent omission of an essential step. It is unclear how parallel impedance, of Claim 1, translates to the parallel impedance gap, of Claims 7 and 8.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Slates, US 6,346,807.

As per Claim 1, Slates discloses a method of testing a cable (**20** and **30**), said method comprising:

- measuring at least one inductive ratio for the cable (column 35, line 66 - column 36, line 2);
- determining an inductive gap from the at least one inductive ratio (column 11, lines 36-38);
- measuring a parallel impedance of the cable (column 2, lines 30-34); and
- determining a resistance of the cable based on the inductive gap and the parallel impedance (FIG. 20, resistance on x axis).

As per Claim 2, Slates further discloses a method of testing a cable, wherein measuring an inductive ratio for the cable comprises measuring the inductive ratio for the cable at each of a plurality of predetermined frequencies (FIG. 2, 5 predetermined frequencies).

As per Claim 3, Slates further discloses a method of testing a cable, wherein measuring an inductive ratio for the cable comprises measuring the inductive ratio for

the cable using three different predetermined frequencies (FIG. 2, 5 predetermined frequencies).

As per Claim 4, Slates further discloses a method of testing a cable, wherein measuring at least one inductive ratio for the cable comprises measuring the at least one inductive ratio for the cable substantially simultaneously with measuring the parallel impedance of the cable in real-time (column 38, lines 56-57). The inductive ratio measuring and parallel impedance measuring algorithms are broadly interpreted as "multiple signal processing algorithms on the system, run at the same time".

As per Claim 5, A method in accordance with Claim 1 wherein determining an inductive gap from the inductive ratio comprises averaging at least one inductive ratio (column 19, lines 5-11). Slates discloses averaging the voltages from which the inductive ratio is derived. Therefore, it would be obvious to a person of ordinary skill in the art to average the inductive ratio.

As per Claim 6, Slates further discloses a method of testing a cable, wherein determining a resistance of the cable comprises locating the resistance value using a look-up table (column 21, lines 42-47). It would be obvious to a person of ordinary skill in the art to obtain the resistance from the impedance lookup table, as resistance is part of the equivalent impedance value.

As per Claim 7, Slates discloses a method of testing a cable as in Claim 6 above, and further discloses the testing method, wherein locating a resistance value using a look-up table comprises locating the resistance value using a look-up table of inductive gap versus parallel impedance (FIG. 20, wherein the parallel impedance corresponds to the parallel impedance gap). It would be obvious to a person of ordinary skill in the art to look up the resistance from a graph that display both the impedance and inductive gap.

As per Claim 8, Slates discloses a method of testing a cable as in Claim 7 above, and further discloses the testing method, wherein the look-up table is empirically derived and wherein locating the resistance value using the look-up table further comprises:

determining a first look-up table curve using a first predetermined resistance (Known Load, FIG. 14) coupled in circuit parallel with the cable (column 29, lines 10-13);

determining a second look-up table curve using a second predetermined resistance (Known Load, FIG. 14) coupled in circuit parallel with the cable (column 29, lines 13-14) wherein the second resistance is different than the first resistance (column 29, lines 49-50);

correlating an average of the cable inductive ratios to a look-up table inductive gap (column 5, lines 52-58);

correlating a parallel impedance of the cable to a look-up table parallel impedance (column 5, lines 7-8, wherein the parallel impedance corresponds to the parallel impedance gap); and

determining a cable resistance based on the look-up table (column 21, lines 42-47). It would be obvious to a person of ordinary skill in the art to obtain the resistance from the impedance lookup table, as resistance is part of the equivalent impedance value.

Response to Arguments

5. In response to applicant's argument that Slates, US 6,346,807, does not teach a method of testing a cable as recited in Claim 1, the examiner points out that the test of Slates is of the cable **20/30** (cable with extension cable), wherein the inductive ratio of the cable is measured as described in column 35, line 66 - column 36, line 2, the inductive gap is determined from the at least one inductive ratio as described in column 11, lines 36-38, the parallel impedance of the cable is measured as described in column 2, lines 30-34, and the resistance is determined as described in figure 20. Although the resistance measurement in figure 20 is an intermediate step to obtaining a reliable reactance measurement, the resistance measurement can nevertheless be obtained from the x-axis of figure 20.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Kramskaya whose telephone number is (571)272-2146. The examiner can normally be reached on M-F 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571)272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2858

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MK

Marina Kramskaya
Examiner
Art Unit 2858

M. Kramskaya

V. Nguyen

**VINCENT Q. NGUYEN
PRIMARY EXAMINER**